



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,173	03/10/2004	Christian Dachauer	004640-044	3507

21839 7590 11/02/2006

BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

LU, JIPING

ART UNIT	PAPER NUMBER
----------	--------------

3749

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,173

Applicant(s)

DACHAUER ET AL.

Examiner

Jiping Lu

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25,27-29,31-39 and 41-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14,15,33-39 and 43 is/are allowed.
- 6) ☒ Claim(s) 1-13,16-25,27-29,31,32 and 41-42, 44-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/25/2006 has been entered.

Claim Rejections - 35 USC § 112

2. Claims 44-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitations in claims 44-45 are not supported by the originally filed specification. The disclosure and Figs. 2, 5c do not mention that the first chamber has an area equal to $\frac{2}{3}$ of the total area of all chambers as claimed in claim 44 and absolute filling height of the fluidized granulate in the first chamber is greater than in each of the chambers downstream of the first chamber as claimed in claims 44-45.

Specification

3. The amendment filed 9/25/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the added passage regarding to Fig 2, "the absolute filling height of the fluidized granulate in the chamber 2 is greater than in each of the chambers 3-6 downstream of the chamber 2" is deemed to be new matter. The added passage regarding Figs 5b and 5c, the ratio of the ratio of the area of the first chamber A to the total area of all chambers A is 2/3 is new matter. The original disclosure and original Figs. 2, 5c do not support the newly added passages in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-13, 16-25, 27-29, 31, 41-42, 44 are rejected under 35 U.S.C. 103 as unpatentable over Petersen (U. S. Pat. 5,133,137) in view of Geissbuhler et al (DE 19500383 A1) and Brassert et al. (U. S. Pat. 2,316,664) .

Petersen shows a fluidized bed continuous thermal treatment of granular bulk material. same as the broad claims. Petersen's device includes a product inlet 12, 24, 25 in a first chamber 13, a product outlet 23 in the last chamber 14 downstream from the first chamber 13 and several fluidization chambers (at 14, 17, 55) with several gas permeable sieve bottom 16, 17. The gas

Art Unit: 3749

18, 19 is injected into respective chamber 13, 14, to fluidize the granulate and exited in a roof area 20 of the device. Adjacent chambers are separated by separating walls 15. The first chamber is larger than the other chambers. For claim 6, see openings 22. For claim 10, see 22a.

However, the device of Petersen does not show a zigzag separator forming a roof of the chambers. Petersen also does not a fluidization gas can be injected into the first chamber at a higher pressure and/or at a higher gas speed than the fluidization gas is injected into the other chambers. Geiossbuhler et al. shows a zigzag separator 13 forming a roof of the chamber 1 between a surface of the fluidized layer and a fluidization gas vent 3 same as the applicant's.

Brassert et al. shows a fluidized bed with fluidization gas supply means 24, 28, 36 for supplying fluidization gas to the fluidization chambers. The fluidization gas can be injected into the first chamber (between 132 and 102) at a higher pressure and/or at a higher gas speed than the fluidization gas injected into the other chambers (by controlling of 24, 36). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the chambers of fluidized bed of Petersen with a zigzag separator roof as taught by Geissbuhler et al. in order to provide a serpentine path of granulate for better granulate separation and heat exchange and to further modify the fluidized bed of Petersen to include fluidized gas supply means for each fluidized bed chamber in order to facilitate the control the fluidized gas supplied to each chamber and therefore improve the heat exchange efficiency. With regard to the claimed the granulate size, chamber shape, chamber volume, type of bulk material and area of the bottom surface of the first chamber, it would have been an obvious matter of design choice to design or choose the size of the granular particle and the shape and volume of the chambers and bottom surface of the first chamber with any desired size and shape and area in

Art Unit: 3749

order to obtain the optimum result since applicant has not disclosed that the claimed size and shape and area solve any stated problem in a new or unexpected way or are for any particular purpose which are unobvious to one of ordinary skill in the art and it appears that the claimed features do not distinguish the invention over similar features in the prior art. For claims 41-42, to use the device of Petersen for treating PET or polymer granulates is deemed to be an obvious matter of uses.

6. Claims 1-13, 16-25, 27-29, 31, 41-42, 44 are rejected under 35 U.S.C. 103 as unpatentable over Brassert et al. (U. S. Pat. 2,316,664) in view of Geissbuhler et al (DE 19500383 A1).

Brassert et al show a fluidized bed continuous thermal treatment of granular bulk material same as the broad claims. Brassert's device includes a product inlet 4 in a first chamber (between 132 and 102), a product outlet 72 in the last chamber (near 78) downstream from the first chamber and several fluidization chambers with several gas permeable sieve bottom. The gas 22 is injected into respective chambers to fluidize the granulate and exited in a roof area 60 of the device. Adjacent chambers are separated by separating walls 132. The first chamber is larger than the other chambers. The fluidization gas can be injected into the first chamber (between 132 and 102) at a higher pressure and/or at a higher gas speed than the fluidization gas injected into the other chambers (by controlling of 24, 36). However, the device of Brassert et al does not show a zigzag separator. Geiossbuhler et al. shows a zigzag separator 13 forming a roof of the chamber 1 between a surface of the fluidized layer and a fluidization gas vent 3 same as the applicant's. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the chambers of the fluidized bed of Brassert et al

Art Unit: 3749

with a zigzag separator roof as taught by Geissbuhler et al. in order to provide a serpentine path of granulate for better granulate separation and heat exchange. With regard to the claimed the granulate size, chamber shape, chamber volume, type of bulk material and the area of the bottom surface of the first chamber, it would have been an obvious matter of design choice to design or choose the size of the granular particle and the shape and volume of the chambers and the area of the bottom surface of the first chamber with any desired size and shape and area in order to obtain the optimum result since applicant has not disclosed that the claimed size and shape and area solve any stated problem in a new or unexpected way or are for any particular purpose which are unobvious to one of ordinary skill in the art and it appears that the claimed features do not distinguish the invention over similar features in the prior art. For claims 41-42, to use the device of Brassert et al. for treating PET or polymer granulate is deemed to be an obvious matter of uses.

7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (U. S. Pat. 5,133,137) in view of Geissbuhler et al (DE 19500383 A1) and Brassert et al. (U. S. Pat. 2,316,664) as applied to claim 1 as above, and further in view of Sanderson (U. S. Pat. 3,360,867).

The device of Petersen as modified by Geissbuhler et al. and Brassert et al. as above includes all that is recited in claim 32 except for the pivotable gate. Sanderson teaches a fluidized bed device with pivotable gate 40 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide the device of Petersen with a pivotable gate as taught by Sanderson in order to control the product discharge.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brassert et al. (U. S. Pat. 2,316,664) in view of Geissbuhler et al (DE 19500383 A1) as applied to claim 1 as above, and further in view of Sanderson (U. S. Pat. 3,360,867).

The device of Brassert et al. as modified by Geissbuhler et al. as above includes all that is recited in claim 32 except for the pivotable gate. Sanderson teaches a fluidized bed device with pivotable gate 40 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide the device of Brassert et al. with a pivotable gate as taught by Sanderson in order to control the product discharge.

Allowable Subject Matter

9. Claims 14, 15, 33-39 and 43 are allowed.

Response to Arguments

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

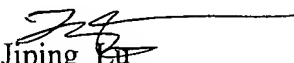
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

Art Unit: 3749

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, COCKS JOSIAH can be reached on 571 272-4874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jiping Lu
Primary Examiner
Art Unit 3749

J.L.